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FOUNDED BY WILLIAM HUNTING, F.R.C.V.S.

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BOVINE TUBERCULOSIS.

One of the inevitable effects of the war has been a great subsidence of activity against and interest in bovine tuberculosis. From one point of view, this is not regrettable. For years both the agricultural and the veterinary press were flooded with matter relating to the subject. That in the agricultural journals did good work in educating stock-owners; but a great many of the papers appearing in the veterinary press were little more than repetitions upon a thread-bare theme, and few of them succeeded in advancing the subject. It is not to be regretted that the number of such papers diminish.

The suspension of the Tuberculosis Order is another matter. However unavoidable it was, it was none the less undeniably a national misfortune. But the evil can be materially modified by individual voluntary action on the part of stockowners against tuberculosis in their own herds; and our profession can both prompt and aid such action. Many veterinary surgeons, long before the coming of the first Tuberculosis Order, were doing their best to induce farmers to work against tuberculosis; and some of them succeeded in doing great good in their own districts. Those who still keep up the endeavour will probably find that the task has become much easier since a Tuberculosis Order has been in force, if only for a comparatively short time.

One of the results of legislation against any animal contagious disease is that it always has an educative effect. It instructs the less educated section of stock-owners regarding many points in connection with the disease which they had previously failed or refused to grasp, and it helps them to realise the importance of the disease. Our legislation against tuberculosis was not in force long enough to have full effect in this direction; but it will certainly have effected something. Further, all farmers realise that it has only been suspended owing to the war, and that its re-introduction afterwards is certain. For these reasons, farmers will be more ready to work against tuberculosis than many of them were three years ago.

On the whole, it is probable that the good sense of farmers and the advice of veterinary surgeons will prevent any very serious effects from the suspension of the Order. Undoubtedly we are not making the headway without the Order that we should have done with it; but when the disease is under legal supervision again, we expect to find that it has tended rather to decrease than to increase during the interval.

AN UNCOMMON SPRAIN?

Subject. A light draught mare.

History. The animal—a ringworm case—was picketed in the open in the usual way, *i.e.*, secured to a picketing line in front by a head rope from the head-collar, and to a peg behind by a rope from the heel shackle. In this instance the off hind limb was shackled. During the night the animal got cast, through getting the near hind leg over the head rope, this no doubt having been tied too long. As regards the position of the animal when cast, excepting that the near hind limb was pulled forward by the head rope the only information obtainable from the picket was that the mare was "tied up in a knot."

Symptoms. When seen next morning the animal was standing quite easily. The near hind limb was advanced a little and held in a state of flexion, as seen in photograph 1. There were no indications

No. 1.

of pain as shown by restlessness, sweating or blowing. The heel of the limb was a little chafed by the rope, but this was insignificant. In progression there was no difficulty in bringing the leg forward, the foot being lifted so that the toe did not catch the ground.

Having advanced the limb there was hesitation to put any weight on it. Repeated attempts were made by the animal as if to try what amount of weight the limb could support.

When forced to move forward at this stage the limb collapsed. The quarters sank very low, all the joints from stifle downwards were flexed. The off limb was quickly advanced to relieve the near

limb of its load and to raise the quarters. Photograph 2 shows the sinking of the quarters and the off limb just advanced.

No. 2.

Photograph 3 shows the weight on the off limb, the quarters raised to the normal height and the commencing advancement of the near limb.

There was no observable swelling in any part of the limb, and when moved by the hand in all directions there was little or no flinching as if the movements produced pain.

No. 3.

Pressure over all the parts from the hip downwards did not give any indication of the whereabouts of the injury, excepting that there appeared to be slight tenderness behind the upper half of the tibia, but compared with the degree of lameness the tenderness was inconsiderable.

Diagnosis. Collapse of the limb when weight was placed on it, considered with the absence of pain or swelling, suggested paralysis.

Examination of the photographs and knowing the condition was caused in all probablity by the animal struggling with the limb forcibly extended, and that the termination was rapid and complete, recovery seems to strongly indicate injury to the gastrocnemius, and most likely to its muscular portion.

Treatment. The animal was turned loose in a box, physicked, and embrocation applied over the posterior tibial region.

Termination. The condition improved daily, and in ten days the animal was quite sound.

W. Kendrick, Lt., a.v.c.
Chilcomb, Winchester.

FOUL IN THE FEET OF CATTLE.

The reading of Mr. Fletcher's practical and suggestive paper which appeared in the issue of last week has tempted me to make a few observations upon the disease. The disease foul or loo—it is a great pity we cannot disband these barbaric terms and replace them with something more scientific and descriptive—is seen most commonly in low-lying, marshy lands, although it is by no means uncommon in the cattle pen.

Predisposing causes. An abrasion of the skin is essential at the outset. By that I do not mean an actual, visible wound; a breaking down of the epidermal layer and exposure of the subcutis in the region of the coronary band and interdigital space may be all that is necessary. Such a condition can be produced by cattle grazing on low, wet pastures during a rainy season, particularly where the grass is coarse and "rank"; it is also seen in pastures covered with hoar frost. In the case of the former, the continual wet softens the horn at the coronet, separates it from the coronary band, and so developes a pocket for debris, while the roughness of the grass tends to injure the skin. There is another cause which comes under this head, and is worthy of consideration. Foul is most commonly seen in the hind feet, owing partly to the fact that the distance from the centre of the circulation is greatest, and that the hind legs are more liable to bacterial contamination than the fore feet.

Actual cause. This is purely bacterial and purely local. Foul in cattle is synonymous with quittor, poll evil and fistula in the horse. The same types of causal bacteria are in evidence, and further, the same structural and circulatory local drawbacks are encountered, *i.e.*, bacteria invading ligamentous, osseous, cartilaginous structures as found in the foot, the poll, and the withers; which means the organs affected are lowly vascular, being nourished by a process of osmosis only—not over perfect at that—and this in turn demonstrates that the cellular and humoral protective mechanism of the blood is imperfectly developed and unable to cope with such an infection to the full.

From the examination of many cases (biologic and microscopic) I am convinced the staphylococcus albus and aureus are the primary causative organisms in most cases: and while streptococci occasionally take first place, the secondary bacteria to invade

the injured parts are the B. coli; sometimes the B. pyocyaneus and, very occasionally, B. necrosis. Prevent access of any or all of these disease producers and we would never find cases of foul in cattle. It must be pointed out, however, one does occasionally come across tuberculosis in this region. I can remember having seen two cases confirmed. Actinomycosis is also not unknown here; I have met with five cases in practice, and it is quite feasible to suspect Botryomycosis in this region, but this condition I have never seen, or, to be more exact, diagnosed.

Treatment. Bearing in mind that we are dealing with a local bacterial infection, which in point of fact demonstrates a breakdown of the protective body mechanism at the hands of the aggressive bacteria, and at a part—as we have already seen—where the bacteriotropic elements are none too plentiful, the first thought which occurs to the practitioner is, How can we augment those immunising forces? *i.e.*, by increasing the local blood flow. But it might be argued there is too much blood there already, as witness the throbbing in the artery, the tense and painful condition of the parts, the continual "lifting" of the foot, and the constitutional disturbance; all pointing to inflammatory tension and stasis. Stasis—that is the condition we are up against at this stage. The bacteria have gained a footing, the endo and exotoxins along with bacterial proteins have exhausted the immune bodies and the phagocytic elements in the region. Not only that, but through the calcium content blood coagulation has completely taken place, shutting off all chance of new blood and serum rich in immune bodies reaching the parts.

To alter this, local and systemic lymphagogues and decalcifying agents should be used. The administration of full doses of Citric acid combined with a vaso-motor dilator—of which there is none better than Tinct. aconiti, locally deep scarification of the parts, after which the whole leg should be placed in a hot bath containing Citrate of soda and common salt, while at this point Bier's treatment should be applied, care being taken that venous only, and not arterial pressure is applied. This combined treatment will bring about a rich antibacterial flow through the whole infected zone, and flush the parts with rich immune sera.

Antiseptics, particularly those of the albumin coagulating type, should be severely condemned.

Provided we are called in before ligamentous necrosis, ulcerative arthritis, periostitis combined with deep seated ostitis, sets in, nature possesses all the remedial agents we require—with this exception, perhaps, an antigenic stimulus in the shape of autogenous vaccines. These, in my hands, have given excellent results. Of course, in advanced and neglected cases heroic surgical interference holds out the only hope; free use being made of the curette, and even amputation. Here also the free use of antiseptics thwarts nature's healing efforts.

W. M. Scott, F.R.C.V.S., F.R.M.S.
Bridgwater.

ABSTRACTS FROM FOREIGN JOURNALS

Spore formation in Glanders Bacilli.

Carpano, at the end of 1912, published some observations upon the glanders bacillus (*Il Moderno Zooiatro*). In cultures of the bacillus, he observed, in addition to the ordinary forms, threads of varying length and of a thickness which was sometimes variable and sometime uniform. These threads are neither involution nor degeneration forms, but vigorous, fertile, and probably also pathogenic forms of the glanders bacillus.

A few months later Carpano published some further observations of these thread-like forms (*La Clinica Veterinaria*, 1913). He found that, after growing upon suitable media for from 20 to 30 days, or in rare cases for a shorter period, they generated spores. The spores had the aspect of Chlamydospores; and on this account Carpano is inclined to class the glanders bacillus among the hyphomycetes. At first the spores appear in small numbers; but as the age of the cultures increases they become more abundant. They do not develope upon all culture media, and do not develope conconstantly upon the same medium. Suitable media for their development are weakly acid peptone-bouillon with 4% of glycerine, potato-peptone-bouillon, carrots with or without the addition of glycerine, and sometime also glycerine-agar.

The spores arise as spindle-shaped or oval swellings of the threads, gradually become rounded, and finally are set free by rupture of the threads. Their size is somewhat variable; the round forms have a diameter of from two to four microns, and the oval ones are from four to eight microns long and from two to four microns broad. As a rule a single thread forms only one spore, and this appears in the middle of the thread. The spores, in the fresh condition, show an external envelope and a refractile and generally granular interior.

The spores stain with Ziehl's Carbol.fuchsin, with Carbol. crystal violet, or still better with a diluted Giemsi solution (from 1 in 20 to 1 in 30) after previous fixing in a mixture of Potassium bichromate, sublimate, and glacial acetic acid. In the latter case the main portion of the spore contents stains violet like chromatin, and the remainder is lighter, more of a lilac shade, and beset with numerous small round vacuoles.

Carpano believes that sporulation can occur, not only in cultures, but also naturally, when diseased products escape from the animal body into the surroundings and find conditions favourable to the development of persistent forms of the bacillus. This theory would afford a simple explanation of certain cases recorded in the literature and often doubted, in which, despite the most stringent preventive, fresh cases of the disease have continued to reappear from time to time in infected stables.—(*Berliner Tier. Woch.*)

Rupture of uterus in a pregnant cow.

Paul Wigand, of Schwarmstedt, has reported the following unusual case. The subject was a very

well formed and well nourished cow, about seven years old. Wigand was call to her because, though previously quite well and vigorous, she had suddenly shown symptoms of intestinal impaction and tympany.

He found her standing quietly in the stall, with her back slightly arched and her head sunken, but paying plenty of attention to her surroundings. The abdomen was very tympanitic. From time to time the cow paddled with her hind feet, without, however, moving from the place where she stood. The whole surface of the body, especially on the back, ears and horns, was remarkably cool. The skin on the sides of the thorax was soft and elastic, and the hair was smooth. The eyeballs were somewhat retracted into their sockets. The mucous membranes were a pale yellowish-rosy colour. There was some lachrymation from the inner corners of the eyes. The pulse was weak, regular, and uniform, and counted 104 per minute; the artery appeared hard. The sounds of the heart were clear and weak. The respirations were superficial and regular, and counted 49 per minute. Coughing was not observed, and could not even be induced artificially. Clear thin streams of mucus were hanging from the corners of the mouth. The muzzle was cool and exceedingly moist. Appetite, rumination, eructation, and peristalsis of the rumen and intestines were all completely suspended. The tympany of the rumen was causing an upper and lateral bulging of the left flank. The anus was firmly closed. The vulva was small and shrivelled. The vaginal mucous membrane was a pale yellowish-rosy colour, and was almost dry. Both the pelvic ligaments were tense and firm. The tail was slightly lifted and held about two fingers breadth away from the anus and vulva. The udder was soft and flaccid, and its lymphatic glands were not enlarged. Some apparently normal milk could be drawn from each teat. The cow was due to calve in six weeks; and the history was that she had been milked three times daily up to the present, and had been accustomed to give about two litres (= about 3½ pints) of excellent milk at each milking, but had given none at all that day. Palpation of the right wall of the abdomen revealed the presence of a fœtus; but this could only be felt at one limited point deep down in the abdomen and about 4-4/5 inches in front of the stifle joint.

Rectal examination, which was very difficult on account of the tympany, resulted as follows. The rectum was quite empty, save for a little stringy and very sticky mucus. The bladder was quite empty and firmly contracted. The neck of the uterus and the anterior portion of the vagina were drawn forwards and downwards. Only the right horn of the uterus was accessible to the hand; and this lay very high up, to the right of the vertebral column. It had—so far as could be estimated by palpation per rectum—a length of from 20 to 24 inches and a thickness of about eight inches. Its consistence was almost like that of a moderately tense muscle. The whole surface of the organ was covered with superficial wrinkled folds. The cotyledons were strongly developed, but could only be felt indistinctly on account of the contraction of the horn. No trace of fluctuation was present, and no parts of the fœtus could be felt in the horn. The horn was easily movable in the abdominal cavity when pushed upon through the rectum. In short, the right horn showed all the characters which a normal uterus, after parturition but before the expulsion of the membranes, presents to rectal examination.

The left horn lay much deeper than the right, and was so much pushed downwards and covered by the tympanitic rumen that it could not be reached from the rectum.

Wigand now again palpated the right abdominal wall, and felt the fœtus very distinctly in the same place as before. He then made a vaginal examination, which showed that the os uteri was closed. Finally, he again examined per rectum, this time introducing his arm up to the shoulder. He then, with tips of his fingers, reached a place far forwards and somewhat to one side, where four or five cotyledons almost the size of goose's eggs could be felt very distinctly indeed directly under the wall of the rectum. These cotyledons seemed to be protruding from a slit-like opening running in a longitudinal direction in the womb. The opening itself was not palpable; apparently it had so far closed that the pedicles of the cotyledons were compressed by the edges of the opening.

Wigand advised speedy slaughter; but, as that could not be carried out at once, and as the chief immediate difficulty appeared to be the tympany, he adopted symptomatic treatment for the time being. This consisted of a mixture of Acid hydrochlor. and Tinct. veratr. alb. administered every three hours. To his surprise this was followed by great apparent improvement. The next day the tympany had disappeared, and defecation, appetite, and rumination were re-established. The cow continued to be quite lively for several days, till, five days after the first examination, she showed labour pains, and Wigand was again called.

To his great surprise he found two long "water-bags" hanging from the vulva. The vulva was small and remained wrinkled, the pelvic ligaments were only very slightly relaxed, but the udder showed considerable œdema. Vaginal exploration revealed a normally presented calf, which was very easily drawn away. It was dead, but quite fresh, as if it had died during parturition. It weighed 34 pounds.

Wigand now again palpated the right abdominal wall, and could feel a fœtus in exactly the same place as at the first examination.

Wigand then explored the uterus, finding the vagina rather narrow and the os uteri well opened. He easily ascertained that the fœtus just extracted had lain in the *left* horn of the uterus. Exploring the right horn, he found the previously mentioned opening in its wall well forwards and somewhat to one side. He could pass four fingers through the opening, and could touch a part of the fœtus—probably the hock joint—with his finger-tips.

The condition of the cow was now very bad. The skin was very cool, the eyes were deeply sunken,

and the pulse was weak and counted 140 per minute. The respirations counted 38 per minute, and were seriously altered in character. A hasty inspiration was followed by a short pause, and then by a jerky expiration accompanied by a slight groan.

Wigand advised immediate slaughter. Some hours later he carried out a post-mortem examinations, which resulted as follows:—

The dead fœtus lying in the abdominal cavity was quite fresh. Its hair and claws were firmly attached, and there was no trace of putrefactive emphysema. It weighed 47 pounds.

The examination of the abnormal opening through which the fœtus had escaped from the right uterine horn yielded unexpected results. After the protruding cotyledons had been pressed back the opening presented itself as an elongated oval smooth-edged "window" of an average diameter of only four inches. There was no appearance of a rupture having taken place. The opening had much more the appearance of having been punched out and the edges of having been pared to uniform thinness from within and without. In the immediate neighbourhood of the opening the uterus was almost as thin as paper. In this region the muscular layer was completely absent, and the peritoneal covering seemed gradually to blend into the mucous membrane of the uterus. There was no trace of any bleeding having taken place. On the other hand there was a considerable grey-yellow and somewhat transparent fibrinous deposit upon the peritoneal covering of the right horn; and under this there was marked injection of the blood-vessels. The serous covering of the lower part of the right abdominal wall showed quite similar alterations. The fibrinous deposits were quite free from smell. All the other organs of the cow, especially the spleen, liver, kidneys, heart, and lymphatic glands, were quite free from any alterations which might suggest the passage of toxins into the blood-stream.

Wigand is convinced that the fœtus had left the uterus some days before the cow first showed symptoms of illness. It had lain in the abdominal cavity as an aseptic foreign body; and might perhaps have remained there a long time without causing any noticeable reaction, if the condition had not been complicated by the twin pregnancy.

Wigand finally remarks that he has described this case as fully as possible, partly because he has only found brief mention of similar observations in the literature, and partly because the diagnosis of "extra-uterine pregnancy" during life has generally been held to be impossible.—(*Berliner Tier. Woch*).

A Pathogenic Bacillus Subtilis.

Leitz has recorded that he isolated from a young Chinese patient, who was suffering from severe diarrhœa, a *Bacillus subtilis*, which was also pathogenic to animals (*Zentralbl. f. Bakt. u.s.w.*). Morphologically, the bacillus greatly resembled the anthrax bacillus; and its cultures also, at first sight, gave the impression of being anthrax colonies. The bacterium was weakly motile, showed no membrane formation in bouillon, and only liquified gelatine very slowly. The sterile filtrate of its bouillon culture, when injected into guinea pigs in large doses, was toxic.—(*Berliner Tier. Woch.*)

W. R. C.

Report of the Chief Veterinary Surgeon, Southern Rhodesia, for the Year 1914. [Abridged].

"As in previous years, it has to be again recorded that the most important work of the Veterinary Department was in connection with African Coast Fever. Whilst the scientific knowledge of the nature of this disease has not been added to greatly during the year, the accumulation of practical knowledge year by year gives greater confidence and hope of its eventual eradication from Southern Rhodesia. Two points in connection with this disease as it occurs in this Territory remain to be solved:—(1) The occurrence of a single case of the disease in a herd of cattle, and (2) the recrudescence of the disease on old centres of infection, in some cases several years afterwards. A solution of these occurrences would considerably help to expedite the eradication of this disease.

During the year six outbreaks occurred. It is doubtful if three of these were recrudescences or extensions from existing outbreaks. The mortality for the year is 199 animals. If we compare these figures with the number of outbreaks and deaths that have occurred in previous years, the impression obtained is that little or no progress has been made in eradication since last year. So far as the actual figures go, this is correct, but when one considers the extent of the infected area at the present time compared with its extent last year, shows that considerable progress has been made.

Dipping Tanks and Dipping. So much has been said in the past upon the value of regular dipping of cattle, not only as a safeguard against African Coast Fever, as a means of eradicating it when once it has obtained a foothold in a herd, but also as a sound economic farming proposition, the principal of which is accepted by all progressive stockowners throughout the Territory, that at the present time it is unnecessary to elaborate these points. It is satisfactory to be able to record a steady increase in the number of cattle dipping tanks. The number now in use throughout the Territory exceeds 430. The compulsory dipping of all cattle in the area around Bulawayo, proclaimed under Government Notice No. 352 of 1913, has been continued, and, all circumstances considered, works very smoothly and well. Several stockowners outside this area desire to see its boundaries enlarged so as to include their properties.

Piroplasmosis or redwater, and *Anaplasmosis* or gall-sickness, still claim a certain percentage of deaths. but these principally take place where ticks are numerous, and chiefly in cattle imported from overseas and the Union of South Africa, in cattle bred in Rhodesia that have been regularly dipped and moved to such a place, and in locally-bred graded cattle. The experience of the District Veterinary Surgeon, Bulawayo, as set out in his report for the year in the following words, is interesting:—'Those people who imported stock from overseas have found dipping most satisfactory in combating the mortality from natural infection of redwater and gallsickness. Amongst all the animals imported and treated in this manner there has occurred only one death, and this was due to drinking dip.'

During the year all cattle imported from overseas were subjected to the tuberculin test. The test was also applied to certain other animals imported from the Union of South Africa. In all, 288 animals were tested,

with the result that ten were destroyed, two of which were animals that were found to be suffering from the disease at the end of the previous year, and eight were heifers (in one herd) that were originally imported from the Union of South Africa.

In October contagious abortion was discovered for the first time in Southern Rhodesia, the subjects being some cattle that had recently been imported from Northern Rhodesia, and were still in quarantine near Sipolilo, in the Lomagundi district. Soon after, another centre of infection was found to exist in the Marandellas district. This apparently was quite separate, and had no connection with the Sipolilo outbreak. On tracing it up, two other centres were found to exist in this district. Samples of blood from the infected cows were forwarded to Sir John M'Fadyean, R.V. Coll., London, who confirmed the Gov. Vety Bacteriologist's diagnosis, and stated that he had no doubt we were actually dealing with the contagious abortion of cattle which is common in England. So far as our present experience of it goes, the disease appears to be less virulent than it is in England, in that a smaller percentage of animals in the herd abort. Whether it will also yield easier to measures of eradication remains to be seen.

The Territory remains free from glanders. During the year 681 horses, 231 mules, 1743 donkeys were tested with mallein on importation. It is a pleasure to be able to record that no reactions to the test occurred, showing that the adjoining territories are gradually eradicating the disease.

Rinderpest. During the first half of the year this disease had not spread in a southerly direction. The authorities in German East Africa were apparently holding it in check north of the Ruaha River up to the outbreak of the war, since when, of course, no information as to its progress in that territory has been obtainable. The Governments of Nyasaland and Northern Rhodesia are taking all possible precautions on their borders to prevent its entry into their territories from German East Africa. Veterinary surgeons are stationed on that border, and the Government of Southern Rhodesia is immediately informed by telegraph, through His Excellency the High Commissioner, of any matters of importance which occur there. The recommendation of the Veterinary Conference, held in Bulawayo in April, 1912, that the Government of Southern Rhodesia should obtain and establish a reserve of 50,000 doses of rinderpest serum was given early effect to, and this material has been on hand for several months past. During the year Mr. L. E. W. Bevan, Veterinary Bacteriologist, visited British East Africa to enquire into the methods practised in the territory in combating the disease, and we are much indebted to the officials of that Administration for the generous assistance given him.

Trypanosomiasis. Owing to the constant spreading out of civilisation into the uninhabited country, this disease is more frequently met with, and is becoming yearly of more importance. Many oxen used in the opening up of areas for mining purposes have been affected, and would no doubt have died if the Government Veterinary Bacteriologist had not discovered a treatment enabling such animals to recover and continue their useful work. Other animals and man have also been infected, and the general impression is that the tsetse fly areas, as a whole, have extended.

No cases of anthrax, lungsickness (contagious pleuropneumonia of bovines), black quarter or quarter evil, or rabies have occurred during the year.

When the extent of the Territory is considered with the present necessity of importing numbers of animals to fill up the vacant places therein, the comparatively small amount of infective disease amongst animals must be considered as satisfactory.

Scab in Sheep and Goats. In years past, for various reasons, these diseases have received scant attention, but owing to the increasing importance of the small stock industry, and at the request of breeders, an attempt was made to get all outbreaks reported and eradicated as far as possible with the present staff. The disease has been found to be not very prevalent, not nearly so prevalent as it was generally supposed to be, and with the exception of advanced cases of goat scab, readily yields to treatment.

Gall-lamziekte. Great uneasiness was manifested in various districts lest the disease known as gall-lamziekte should be introduced by cattle from the south. In the early part of the year the Chief Veterinary Surgeon visited the Transvaal and Cape Province, with the object chiefly of making enquiry into the disease. The greatest courtesy and every assistance were extended to him by Sir Arnold Theiler, Director of Veterinary Research, and Mr. C. E. Gray, the Principal Veterinary Officer of the Union. A number of farms in Bechuanaland where the disease existed were visited, and a number of cases examined. It is sufficient to say that his investigations and enquiries strengthened the view previously advanced, viz., that if it were a disease capable of being introduced by cattle it would have appeared in Rhodesia years ago. It is suggested by the most recent investigator that the disease is caused by sarcosporidia, and in this connection I merely wish to record that these parasites have been found in animals from widely different areas in Southern Rhodesia.

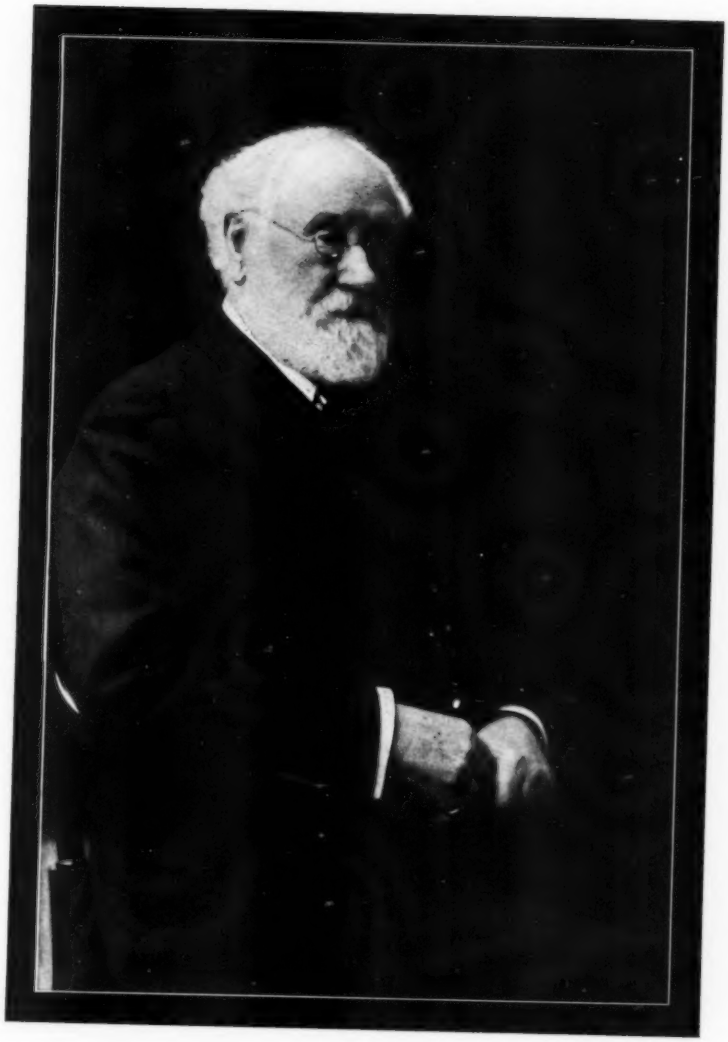
Importation of Cattle from Texas. Whilst on vacation leave, the Chief Veterinary Surgeon was deputed to visit Texas for the purpose of enquiring into the health of cattle in that State, with a view to the importation of breeding stock if conditions proved satisfactory. He states in his report that 'There is, in his opinion, no disease of cattle in Texas which, ordinary precautions, is likely to be imported into Rhodesia by the transfer of Texan cattle.'

STAFF.—The appointment of Mr. Jos. Buck, M.R.C.V.S., as Veterinary Inspector at Kimberley for the purpose of examining cattle *en route* to this Territory, is confidently expected to result in a stricter adherence to the conditions of our importation regulations than has previously obtained in some instances, and also to ensure, as far as it is possible to do so, the good health of our importations. On 1st July the Chief Veterinary Surgeon proceeded on vacation leave, and was appointed as delegate for Rhodesia to the International Veterinary Congress which was to have been held in London in August.

During his absence his office was ably filled by Mr. C. R. Edmonds, Assistant Chief Veterinary Surgeon, who has written the major part of this report. The number of Veterinary Officers was reduced by the termination of the agreement of Mr. D. R. Chatterley, who, I regret to say, died *en route* to Capetown. Mr. Chatterley was an able and efficient officer, and a distinct loss to the Department. Mr. H. C. Lowry, who was on the reserve of officers, Army Veterinary Corps, was recalled by the War Office for military duty. Mr. B. Myhill was granted leave of absence for the purpose of proceeding on duty with the Union of South Africa Forces. Early effort was made to fill the vacancies in the staff, but without success, owing to the dearth of qualified veterinary surgeons in England.

IMPORTATION OF STOCK:—From Great Britain—Horses 2, bulls 42, heifers 39; from Union of South Africa—Bulls 461, heifers 4950; from Portugese East Africa—Slaughter cattle 96; from Northern Rhodesia—*Via* Feira—Oxen 694, cows 676, calves 301; *via* Victoria Falls—Cows 50, oxen 1356. Other importations from the South—Horses 665, mules 193, donkeys 1307, sheep and goats 52,508, ostriches 96, pigs 131.

J. M. SINCLAIR,
Chief Veterinary Surgeon."



James McCall

PRESIDENT ROYAL COLLEGE OF VETERINARY SURGEONS 1890-91.
FOUNDER AND PRINCIPAL GLASGOW VETERINARY COLLEGE.

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PARLIAMENTARY.

In the House of Commons on Wednesday, 3rd Nov.

Foot and Mouth Disease.

Mr. Acland (In reply to a question): Since Tuesday morning a fresh outbreak has been confirmed in the vicinity of Bristol, and nothing can at present be traced to connect it with those in the neighbourhood of Monkton Combe. Another outbreak has also been confirmed in the neighbourhood of Limpley Stoke, which may be considered as one of the Monkton Combe series. The total number of outbreaks in the Bath district amounts, therefore, to twenty-five; and the total number of outbreaks altogether to twenty-six. The scheduled district embraces an area of approximately fifteen miles around Monkton Combe, and includes a large portion of Wiltshire, and practically the whole of the city of Bristol. The whole of the outbreaks in the Bath district have occurred within the scheduled district, and in that portion of it in which the movement of animals has been entirely prohibited since the 21st ult. The steps taken to prevent the spread of infection include the prohibition of movement of animals within the scheduled district and the slaughter at the earliest possible moment of all animals affected with the disease and those which have been in close association with them. Circumstances have prevented the slaughter being carried out in the Bath district as rapidly as usual on account of a complete dearth of butchers and of the labour required in connection with the disposal of the carcases of slaughtered animals. The military authorities have now come to the Board's assistance in the matter. Masters of Foxhounds and Hunts affected have been requested by the Board to avoid hunting in any portion of the scheduled district so long as the movement of animals therein is entirely prohibited.

Thursday, 4th November.

Mr. Field asked the Parliamentary Secretary of the Board of Agriculture whether he could state about what period of time elapsed from the outbreak of foot-and-mouth distemper until it was reported; whether any measures were being taken to prevent a repetition of such secrecy; and whether similar precautionary arrangements of prohibiting movement of live stock from within a large area, as practised in Ireland formerly, would be resorted to in this case?

Mr. Acland: I am advised by the chief veterinary officer of the Board that about a fortnight elapsed between the definite outbreak of disease and the day on which it was reported. There is no evidence to show that any of the owners whose stock were affected knowingly concealed the existence of disease, an offence which would render them liable upon conviction to a substantial penalty. There must have been ignorance on the part of the owners and of those who attended the sick animals, but it is difficult to take measures which will entirely prevent people being ignorant of that which they ought to know. In reply to the last part of the hon. member's question, I would point out that the precautionary arrangements adopted in this country are similar to, but not identical with, those practised in Ireland. They are, I believe, adequate under the conditions which prevail here and are being rigorously carried out.

Anglo-Franco-Belgian Veterinary Relief Fund.

The following additional donation is reported:—

Messrs. Geo. Thatcher & Son, London	£1	1	0
Previously reported	51	6	0
Total	£52	7	0

Foot-and-Mouth—Symptoms and Spread.

A leaflet has been issued (No. 292 of the Board of Agriculture and Fisheries) and should prove useful, especially as the malady spreads so rapidly, and a knowledge of its symptoms, the subjects that may be affected, the nature of the infection and its carriers, is important to stock-owners, medical men, and veterinary surgeons. All the domestic animals and ruminants may be infected with foot-and-mouth disease. Human beings may contract the complaint, though they are not the most susceptible class. Cattle are the most susceptible, then come sheep, pigs, and goats, and afterwards horses, dogs, and cats. All suspected outbreaks of the disease are to be reported immediately to the authorities. The filtrable virus to which the disease is due produces its effects usually within 48 to 72 hours, but the incubation period may exceptionally extend to ten days. A high temperature—105° F. in cattle, lameness, slavering at the mouth, and smacking of the lips are present. Lameness in a number of animals, especially if noticeable in more than one species—cattle, pigs, or sheep for example—should arouse the gravest suspicion. The lameness may escape the casual observer, as the animals may be so footsore as to remain lying down. Slavering is not so noticeable in pigs and sheep as in cattle. The lesions consist of vesicles appearing about the mouth and on the finer parts of the skin and about the feet at the junction of skin and hoof. In milch cows the milk yield falls considerably and the lesions may appear on the teats and cause permanent injury to the udder. Very young calves may die from enteritis.

The contents of the vesicles are infective, so also the blood in the early stages of the disease. The virus may be easily destroyed by antiseptics, but under certain conditions which exist in nature it may remain active for months and be carried long distances. Contact and cohabitation of the animals favour the spread of infection, and attendants, utensils, wind-blown saliva, foodstuffs, and water-supply may all act as spreaders of the epidemic. Roads along which affected animals have passed and wagons in which they have travelled may remain infective for some time. Rats, fowls, birds, cats, horses, and dogs may act as carriers of the virus: human beings may possibly convey the disease to animals. The spread of infection is very insidious. A good deal of evidence has been collected which goes to show that a human being may, through his clothes, make the clothes of others infective. Animals which have recovered may be harbourers of infection for a considerable time. The commonest method of infection is through the mucous membranes by way of the alimentary canal; 1/250th of a drop of fluid from the vesicles is sufficient to cause infection. Personal hygiene and disinfection, control of attendants on outbreaks, confining the milk supply to the infected place and boiling it before giving it to other animals, are measures of prevention advocated.

Great loss in stock and money and long periods of prevalence of the disease may result from inability to isolate and stamp out the disease by reason of lack of immediate notification.

A Commission has been appointed by the Governor of Indiana to investigate the causes and means of prevention of mental deficiency in that State. We learn from the New York *Medical Record* that a report recently published by the American Eugenic Society recommends the sterilization of an increasing number of defectives each year until the number reaches about half-a-million. It is estimated that if this recommendation were carried out the propagation of the mentally unfit in the United States would be practically at an end.

The Slaughter of Animals.

At the last meeting of the Bristol Health Committee a considerable discussion place upon the question as to the old methods of killing beasts and pigs being superseded by the "humane killer" and the "captive bolt." Eventually it was decided by a large majority of the members that the methods adopted in the slaughter-houses should be optional, and another resolution was also passed that no permission should be given to constables or the officers of the Royal Society for the prevention of cruelty to Animals to attend at the slaughter-houses.

ARMY VETERINARY SERVICE

WAR OFFICE, LONDON, S.W.

Extract from *London Gazette*,

WAR OFFICE, WHITEHALL, Nov. 4.

REGULAR FORCES. ARMY VETERINARY CORPS.

Temp. Lieuts. to be temp. Captains: — A. F. Dykes, dated Sept. 8. J. Millward, C. H. Butcher, F. R. Adams (Oct. 23.) J. Blackburn (Oct. 24.)

Temp. Lieut. J. Sherley relinquishes his commission, dated Oct. 22.

Nov. 5.

To be temp. Qmr. with hon. rank of Lieut.:—E. H. Morton, dated Nov. 6.

Nov. 6.

Temp. Lieut. to be temp. Capt.:—S. R. Tufts, dated Oct. 8.

Nov. 9.

Vet. Major W. A. Pallin, F.R.C.V.S., from R.H. Gds., to be Major, dated Nov. 10.

Lt. R. T. Smith, from S.R., to be Lieut., dated Nov. 10.

Temp. Lieuts. to be temp. Capts:— W. Brown, dated Oct. 10. T. G. S. Bogue (Oct. 29.)

Temp. Lieut. J. W. Reynolds relinquishes his commn., dated Oct. 28.

Nov. 10.

To be temp. Lieut.:—J. R. Idle, dated Oct. 25. A. E. Brandon (Oct. 26.) L. Barnard (Oct. 27.)

Nov. 11.

To be temp. Lieut.:—H. Tweedy, dated Oct. 16.

Temp. Qmr. and Hon. Lieut. J. W. Higgins, from A.S.C., to be temp. Qmr., dated Nov. 12.

To be temp. Qmr. with hon. rank of Lieut.:—F. Cranfield, dated Nov. 12.

Nov. 9.

R.H. Gds.—Lieut. R. T. Smith, from A.V.C., to be Vet. Lieut., dated Nov. 10.

TERRITORIAL FORCE. ARMY VETERINARY CORPS.

Nov. 8.

To be temp. Major:—Capt. P. W. Dayer-Smith, dated Oct. 11.

The date of appmnt of Lieut. E. Child is Sept. 27, and not as stated in *Gazette* of Oct. 4.

To be Lieut.:—F. W. Somers, dated Sept. 27.

The A.V.C. Comforts Fund.

Strathyre, Parsifal Road,
Hampstead.

Dear Sir,—I have pleasure in enclosing you further lists of kind contributions for favour of publication in your next issue. I am also enclosing particulars of the Concert-Matinee to be held at the Savoy Theatre on Tuesday next, November 16th, at 2.30 p.m. (See advertisement columns.

Owing to change of arrangements at St. James' Theatre the entertainment has been transferred, and I trust all those who have taken tickets for this performance, or who wish to do so, will accept this intimation.

Tickets for the Savoy performance will be issued from R.S.P.C.A. Office, 105 Jermyn Street, in exchange for those sent out for St. James'. Already the booking is very satisfactory, and we hope for a very full house.

Yours truly,
ADELAIDE M. MOORE.

List of Contributions to Nov. 10.

Major Alston Edgar, A.V.C. (St. Columb) Donation and result of Garden Fete				5	0	0
per Capt. Routledge (Bury St. Edmunds) Result of Athletic Sports, etc.				3	0	0
Miss Edwards (Neath)					10	0
Mr. H. B. Forsyth				1	1	0
Mr. Charles Sheather				5	0	0
per Mrs. Shipley—						
Dr. H. Wyllys		10	0			
Mrs. Worship	2	0	0			
Mrs. F. Thurston		7	6			
Miss G. J. Shipley	1	0	0			
Mrs. Shipley, sen.	1	0	0			
Mrs. Ryley		10	0			
Mrs. W. Wyllys		2	0			
Mrs. Auger		5	0			
Mrs. Santy		2	6			
Mrs. Waters		2	6			
Mrs. Holl		10	6			
Mrs. Barcham	1	0	0			
Miss Cleveland		5	0			
Mr. Lark	1	0	0			
Mrs. Buckingham	1	1	0			
Capt. Arnold		2	0			
Mrs. T. Cook		2	6			
Mrs. Barr		5	0			
Mrs. Jack		10	0			
				10	15	6
Mr. G. Mayall					10	0
Major D. J. Barry, A.V.C.				1	1	0
Mr. T. Salusbury Price				5	0	0
				£31	17	6

Amount to May 29	£743	8	6
Sept. 18	12	2	0
Nov. 10	31	17	6

Parcels received from—Mrs. Quinlan, Mrs. Garnett (5), Mrs. Barber (Brewood), Mrs. Walker (Alton), Mrs. Scott (Leyton), Mrs. Nurse and Working Party, containing beautiful comforts as kindly knitted from wool supplied, and also extra gifts from friends, included: Miss Edwards, 5 mufflers, 2 pr. mittens; Mrs. Russell, 7 mufflers, 7 pr. mittens; Mrs. Mettam and Irish

friends, 5 pr. mittens, 22 pr. socks, 8 helmets, 5 body belts, 15 mufflers, writing pads. Mrs. Fernside, 400 cigarettes, box of pcls. of comforts; Mrs. John Perry (Cardiff), Packs of cards; Mrs. Latta (Ulverston), books, 3 pr. socks.

The New Buildings of the Royal (Dick) College.

The memorial stone of the new buildings was laid in July, 1914, by the Marquis of Linlithgow. Within the last few days the hoarding round the building has been removed, and a full view of the front and side elevations is now possible.

Unfortunately, the war has given rise to formidable difficulties, for when war was declared the subscription list was brought to a standstill: labour and materials have also increased in cost, with the result that contracts now materially exceed in amount the probable cost as originally estimated.

In consequence of these financial difficulties, the Board of Management have reluctantly decided that much of the projected work will require to be left in an unfinished state in the meantime, and that only such work as is essential can be proceeded with. Attention is being confined to such laboratories and class rooms as are absolutely necessary in order that teaching work may be carried on. For the time being, provision for research will be greatly limited; and though the facilities for teaching will be better than in the old buildings, they will not be such as it was hoped to make them and as they will have to be made in the near future.

For the carrying out of even the imperfect scheme, it is found that a sum of appproximately £12,000 is still needed. Though it is recognised that this in an unfortunate time at which to be forced to appeal to the public for assistance, the College Board consider that there is ample justification for such a proceeding. At no time in the history of this country has the importance of veterinary science been more apparent than it is at the present moment. In the interests of public health, and to conserve the agricultural wealth of the country, it is essential that a constant stream of veterinary surgeons, trained according to modern standards, should be furnished for civilian appointments and practice. The present war demonstrates the urgent need for more men in the Army Veterinary Corps. The authorities at the War Office have been compelled to appeal to the civilian practitioner, and the appeal has met with a response which threatens to thin the civilian ranks of the profession beyond the limits of efficiency.

The output of veterinary graduates must increase or the country will suffer. And the training of these graduates must be thorough.—*The Scottish Farmer.*

Hypertonic Saline Solution.

In a note on "The use of Hypertonic saline solution in gynæcology" in *The Lancet* of October 30, Mr. Clifford White, F.R.C.S. ENG., writes:—"The hygroscopic properties of glycerine tampons and pessaries have long been made use of in treating inflammatory conditions of the pelvis, but the use of strong saline solution as a vaginal douche has apparently not come into general use, and it is not mentioned in several text-books published during the present year. Since my return to England some months ago I have used a solution made of four drachms of sodium chloride and half a drachm of sodium citrate to each pint of water as a vaginal douche in all inflammatory and septic cases where a douche is required, and find their effect is better than that of the antiseptic douches previously employed. In sepsis (especially abortion cases), after clearing out the uterus and douching it with saline solution, it is useful to leave a few tabloids of salt inside the uterine cavity to ensure that any organisms left there are flooded with the serum that is drawn in to dissolve the salt. The use of salt tabloids was, I believe first suggested by Mr. Beckwith Whitehouse in France.

For hospital out-patient use the powder is put up in the proportion of one ounce of salt to half a drachm of sodium citrate. This proportion of citrate is rather lower than usual, but quite high enough for the purpose, considering that the present price of citrate is about 5s. per pound. The powder, being bulky, is dispensed in paper bags labelled 'Two tablespoonfuls to two pints of water as directed.'

About 1905 the late Mr. Barnard advocated the use of brine enemata for abdominal cases, and since seeing his article at that time I have frequently ordered them and have always been satisfied with their effect. As a rule three to six drachms to the pint is strong enough and does not cause any pain."

Experiments on Living Animals.

By reason of the great stress of work thrown upon the Home Office owing to the war, it has not been possible to prepare the report on experiments performed in England and Scotland during the year 1914 in the usual detailed form under the Act 39 and 40 Vict., c. 77, but a summary report has been issued showing (Table I.) the names of all places registered for the performance of experiments during 1914; and (Tables II., III. and IV.) the names of all persons who have held licences during any part of the year, with the total number of experiments returned during 1914, classified and arranged according to their general nature. The total number of licensees was 678, of whom 188 performed no experiments, but in eight instances it has not been possible to obtain the necessary report owing to the absence of licensees on war service, and the total number of experiments was 87,253 (905 less than in 1913). Under Table II. (A) the total number of experiments (with anæsthetics) was 4889. These were experiments other than those of the nature of simple inoculations, hypodermic injections, or similar proceedings. Of these 4889 experiments there were performed under licence alone, 2772; under certificate C, 263; under certificate B, 1550; and under certificate B, plus EE, 304 experiments. Under Table II. (B) the total number of experiments (without anæsthetics) was 82,364. These were devoted entirely to inoculations, hypodermic injections, and some few other proceedings. Of these 82,364 experiments, 81,891 were performed under certificate A, 383 under A plus E, and 90 under A plus F.

Certificates are granted as follows:—A. Dispensing with the use of anæsthetics. B. Dispensing with the obligation to kill the animal before recovering from anæsthesia. C. Permitting experiments in illustration to lectures. D. For the further advancement of knowledge by testing previous discoveries. E (with A). Permitting experiments on cats or dogs without anæsthetics. EE (with B) Permitting experiments on cats and dogs and dispensing with obligation to kill the animal before recovering from anæsthesia. F. Permitting experiments on horses, mules, or asses.

The returns show that during the year 1914, 22,371 experiments were performed by 19 licensees in the course of cancer investigations; of these, 625 are in Table II. (A) and 21,746 in Table II. (B). The latter are almost entirely inoculations into mice. Ninety-four licensees report over 24,000 experiments which were performed for Government departments, county councils, municipal corporations, or other public health authorities. Twenty-one licensees report over 15,000 experiments for the preparation and testing of antitoxic sera and vaccines, and for the testing and standardising of drugs.

During the year the several registered places have been frequently visited by the inspectors and a large number of experiments have been witnessed. For the most part visits have been made without previous notice. The animals were found to be suitably lodged and well cared for, and the licensees generally attentive to the requirements of the Act and the conditions attached to their licences by the Secretary of State.

The Chief Inspector who makes the report to the Secretary of State for the Home Department is Mr. G. D. Thane. The Advisory Committee appointed by the Secretary of State to assist him with advice in the administration of the Act consists of: The Lord Moulton of Bank, Sir Anthony Bowlby, C.M.G., Sir John Rose Bradford, K.C.M.G., F.R.S., Sir H. Bryan Donkin, M.D., Sir George Henry Makins, K.C.M.G., C.B., Sir Seymour John Sharkey, and Mr. Charters J. Symonds.

Ireland is reported upon separately in Dr. Joseph O'Carroll's report to the Chief Secretary to the Lord Lieutenant of Ireland. The number of persons holding licences in Ireland at the end of 1914 was 30, an increase of five new licences. The physiological laboratory of University College, Galway, has been added to the list of registered places. The number of licensees who returned no experiments was 10. 340 experiments were performed by 20 licensees, 92 being under licence alone and 248 under certificate. 210 were simple inoculations under Certificate A, of which 86 were made for the investigation of diseases of the lower animals. In 132 cases the object of the research was physiological; in 198 the object was pathological, with either a diagnostic or therapeutic aim; and in eight cases the aim was medico-legal. Dr. O'Carroll says: "It occurs to me me that where so many problems especially pertaining to the public health are being examined by earnest and well-qualified persons they might be invited to record in their annual reports a brief note of any results definitely acquired by them.—*The Lancet.*

In the House of Commons on October 20th, Mr. Greenwood asked why the names of those licensed experimenters on living animals who had committed a breach of the law in the course of such experiments were suppressed in the returns relating to such experiments. Sir John Simon said that if the offence were serious and a prosecution followed, the name would, of course, become public; but it had never been the practice to publish the names of persons guilty of technical offences or the omission of formalities which could be adequately dealt with by reprimand. He did not think any useful purpose would be served by altering the rule. The Royal Commission discussed the point in their report, but made no recommendation in favour of publication.

An expensive Cattle Medicine.

At the last meeting of the Devon County Council it was stated that a sample of a much advertised cattle medicine was on analysis found to consist of a coloured dilute solution of ammonia, the value of the contents of a bottle, sold for 2s., being one-twentieth of a penny. Several members wished to have more information about this concoction, but it appeared that the committee had been advised not to give names. The report of the analysis is in the County Council offices, and any member of the Council can peruse it.—*The Lancet*, Oct. 9.

DISEASES OF ANIMALS ACTS 1894 TO 1914, SUMMARY OF RETURNS.

Period.		Anthrax		Foot-and-Mouth Disease.		Glanders.†		Parasitic Mange. ‡		Sheep Scab.	Swine Fever.	
		Out-breaks (a)	Animals.	Out-breaks (a)	Animals.	Out-breaks (b)	Animals.	Out-breaks (b)	Animals.	(b)	Out-breaks (a)	Slaughtered. *
Gr. BRITAIN. Week ended November 6		17	17	10	101			11	20	3	68	238
Corresponding week in	1914 ...	11	11			2	4	‡	‡	6	88	540
	1913 ...	17	17			3	3	20	55	6	50	364
	1912 ...	9	9			4	4	27	32	9	56	732
Total for 45 weeks, 1915		494	560	31	216	41	74	‖718	‖1529	169	3518	15175
Corresponding period in	1914 ...	631	690	24	124	88	269	‡1530	‡2642	165	3770	36048
	1913 ...	475	524			133	325	2123	4213	154	2160	28014
	1912 ...	659	741	82	639	158	292	2529	5349	217	2584	35109

‡ The Parasitic Mange Order of 1911 was suspended from 6th August, 1914, to 27th March, 1915, inclusive.

(a) Confirmed. (b) Reported by Local Authorities. † Counties affected, animals attacked;

Board of Agriculture and Fisheries, Nov. 9, 1915 ‖ Figures for thirty-two weeks only.

IRELAND. Week ended Nov. 6		...	...	...	...	...	...	Outbreaks 1	9	1	16
Corresponding Week in	1914 ...	...	...	...	...	...	...	1	6	2	16
	1913 ...	...	...	...	...	...	...	1	7	...	7
	1912 ...	...	...	2	8	...	...	1	14	2	7
Total for 45 weeks, 1915 ...		1	1	...	...	1	3	65	355	220	1272
Corresponding period in	1914 ...	1	1	76	957	...	...	72	440	180	896
	1913 ...	...	...	...	...	1	1	111	436	126	829
	1912 ...	3	3	68	382	...	...	58	304	200	1610

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, Nov. 8, 1915

NOTE.—The figures for the Current Year are approximate only. * As diseased or Exposed to Infection.